

## Claims

1. An optical network element comprising:
  - a management unit for receiving a management signal, wherein the management unit comprises at least two substantially identical management components,
  - each management component arranged, in use, to independently receive and process the management signal in a manner such that, in use, the processing conducted by one of the components recognises if a management task associated with the received management signal is executed by the other component, whereby double execution of the task is being avoided.
2. A network element as claimed in claim 1, wherein the management task comprises the distribution of one or more of the group of alarm reports, audit logs, alarm logs, status reports and control messages.
3. A network element as claimed in claim 1, wherein the network element is arranged in a manner such that, in use, the management signal is received as an e-mail message transmitted using the standard IP protocols.
4. A network element as claimed in claim 1, wherein the network element is arranged in a manner such that, in use, the management signal is received as an HTTP server incorporated in the network element and accessible via a conventional web browser.
5. A network element as claimed in claim 1, wherein the network element comprises a network node or an in-line amplifier.
6. A network element as claimed in claim 1, wherein is arranged in a manner such that, in use, the management signal can be received from different paths along an optical network to which the network element is connected.
7. A network element as claimed in claim 6, wherein the network element is arranged in a manner such that, in use, the management signal and a duplicated management signal are received at the management unit from the different paths substantially simultaneously, and the management unit is further arranged, in use, to process only one of the management signal and the duplicate management signal.

8. A network element as claimed in claims 6 or 7, wherein ,where the optical network is a ring network, the different paths comprise transmission paths along opposite directions of the ring network.

9. A network element as claimed in claim 1, wherein the management components are each arranged in a manner such that an electronic tag associated with the management signal is stored at a data storage unit of a particular destination object which is the subject of a particular management task, whereby the data storage unit recognises that the particular management signal has been acted upon to avoid duplication of the management task.

10. A method of managing an optical network element, the method comprising the steps of:

- receiving and processing a management signal in parallel in at least two independent processes and in a manner such that one of the parallel processes conducted recognises if a management task associated with the received management signal is executed as a result of the other process, whereby double execution of the task is being avoided.

11. An optical network comprising one or more optical network elements as defined in any one of claims 1 to 19.